

### ABSTRACT

The invention pertains to a combination of a histone deacetylase inhibitor and N-{5-[4-(4-methyl-piperazino-methyl)-benzoylamido]-2-methylphenyl}-4-(3-pyridyl)-2-pyrimidine or a pharmaceutically acceptable salt thereof for simultaneous, separate or sequential use for the treatment of leukemia and especially N-{5-[4-(4-methyl-piperazino-methyl)-benzoylamido]-2-methylphenyl}-4-(3-pyridyl)-2-pyrimidine-resistant leukemia.